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EXAMINER

MOORE, IAN N

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Please find below and/or attached an Office communication concerning this application or proceeding.

58

Office Action Summary	Application No. 10/760,167	Applicant(s) KUBLER ET AL.	
	Examiner Ian N. Moore	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/6/06;6/23/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 73, 79 and 85 are objected to because of the following informalities:

Claim 73 recites the clause the optional language “**opable to**” in lines 7. The claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. Applicant is suggested to revise the claim, or clarify that the steps, which follows “opable to”, to be performed are required (not optional).

Claim 85 is also objected for the same reason as set forth above in claim 73.

Claim 73 recites, “**an electrical signal representative of sound**” in line 8 and 10. It is suggested to clarify whether “**an electrical signal representative of sound**” recited in line 10 is the same as “**an electrical signal representative of sound**” recited in line 8.

Claim 79 recites, “**a packet**” in line 2 and line 3. It is suggested to clarify whether “a packet” recited in line 3 is the same packet as “a packet” recited in line 2. It is also unclear whether “**a packet sent to the communication device**” in line 2 is “a digital voice packet” (claim 73, line 9) or “a data packet” (claim 73, line 11).

Appropriate corrections are required.

New Rejection

Claim Rejections - 35 USC § 102 (b)

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 22,24,25,28-30,33-39,41,42,45-47,50-58,61,63-66,69-73,76, and 82-84 rejected under 35 U.S.C. 102(b) as being anticipated by Berken (WO 91/08629).

NOTE- Berken reference is disclosed in IDS submitted by the applicant on 5-3-2006, after the mailing first office action (which was mailed 4-17-2006). Thus, examiner introduces new grounds of rejection on claims 22-72 as being anticipated by Berken. Also, claims 22 and 39 are amended.

Regarding Claims 22, 58, and 63, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has a transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted for converting sound into digital voice packets (see FIG. 1C, phone interface 209 converts sound/voice input from telephone 127 into digital voice packets) for transmission via the wireless transceiver (see page 6, line 16-20; for transmission via radio antenna), and for receiving digital voice packets via the wireless transceiver (see FIG. 1C, for receiving voice packet from RF channel 107 via radio port), the contents of the digital voice packet for conversion into sound (see FIG. 1C, phone interface 209

converts digitized voice packets into analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted for capturing digital data into data packets (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the received data into data packets) for transmission via the wireless transceiver (see FIG. 1C, for transmitting via radio antenna; see page 8, line 8-16), and for receiving data packets via the wireless transceiver (see FIG. 1C, for receiving data packet from RF channel 107 via radio port), the contents of the data packets used for reproducing digital data (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets; see page 7, line 25 to page 8, line 7); and

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device selectively transferring to its wireless transceiver for transmission at least a portion of the information received from its network interface (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its fiber interface 205 by switching/transferring to radio interface for transmission; page 5, line 1-27; page 7, line 19-24), and

selectively transferring to its network interface for transmission at least a portion of the information received by its wireless transceiver (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its radio interface 115 by switching/transferring to fiber interface 205; see page 4, line 16-24; see page 6, line 21-26); and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise destination information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises target/destination routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises target/destination routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN).

Regarding Claim 39, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has wireless transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform

both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital representation of sound (see FIG. 1C, user module exchange/transfers via user module 103's antenna (i.e. radio transceiver 211) formed voice packets (i.e. of telephone/sound signals); see page 6, line 16-20; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital data (see FIG. 1C, user module exchange/transfers via user module 103's antenna (i.e. radio transceiver 211) formed data packets (i.e. data signals); see page 7, line 25 to page 8, line 7;

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device adapting one or both of packets comprising digital representation of sound and packets comprising digital data from its wireless transceiver for transmission via designated one of the at least one network interface (see FIG. 1A,B, a node 101 transmits the voice and/or data packet received from a radio transceiver 115 to a designated/assigned/picked network interface fiber 205 (to PSTN, Ethernet, or Token Ring networks); see page 4, line 16-24; see page 6, line 21-26; and

for adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver (see FIG. 1A,B, a node 101 transmits the voice and/or data packet received from a designated/assigned/picked network interface 205 via a radio transceiver 115 (to user module); page 5, line 1-27; page 7, line 19-24; and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise destination information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises target/destination routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises target/destination routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN).

Regarding Claim 73, Berken discloses one or more circuits for use in a communication device supporting the exchange of voice and data (see FIG. 1A, C,

circuits/modules/components of wireless user device for voice and data communication; see page 4, line 6-9), the one or more circuits comprising:

at least one interface to circuitry for wirelessly exchanging (see FIG. 1A, C, Radio interface 211 circuitry/module) one or both of digitized voice packets (see FIG. 1C, transmitting digital voice packets; see page 6, line 16-20) and data packets (see FIG. 1C, transmitting data packets; see page 8, line 8-16) with at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) of a communication network (see FIG. 1A, wireless telecommunication system; see page 4, line 10-25; see page 5, line 1-17) using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure); and

at least one processor (see FIG. 1C, a combined system of processor 215, switch 213, phone 209, terminal 221, LAN 223) operably coupled to the at least one interface (see FIG. 1C, couples to radio interface 211; see page 6, line 14-20; page 7, line 25-32), the at least one processor operable to:

convert an electrical signal representative of sound into digital voice data for wireless transmission as digital voice packets (see FIG. 1C, phone interface 209 converts sound/voice input from telephone 127 into digital voice packets for radio transmission; see page 6, line 16-20), and to convert digital voice data wirelessly received in digital voice packets to an electrical signal representative of sound (see FIG. 1C, phone interface 209 converts digitized voice packets received from radio interface back into analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5),

capture digital data into data packets for wireless transmission (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the received data into data packets for wireless transmission), and to reproduce digital data from wirelessly received data packets (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets via radio interface; see page 7, line 25 to page 8, line 7), and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise destination information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises target/destination routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises target/destination routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN).

Regarding Claims 24, 41 and 82, Berken disclose a frequency hopping spread spectrum technique (see page 11, line 20-31; frequency hopping system of spread spectrum coding).

Regarding Claims 25, 42 and 83, Berken disclose a direct sequence spread spectrum technique (see page 11, line 20-31; direct sequence spread spectrum coding).

Regarding Claims 28 and 45, Berken discloses the packets exchanged by the at least one portable terminal comprises digital voice packets and data packets (see page 6, line 16-20; see page 5, line 28 to page 6, line; voice packets and data packets are exchanged).

Regarding Claims 29, 46 and 84, Berken discloses wherein digitized voice packets and data packets are transported wirelessly without regard to content (see page 6, line 16-20; see page 8, line 8-16; voice and data packets are transmitted via radio interface regardless whether it is voice or data packets).

Regarding Claims 30 and 47, Berken disclose the wired network comprises a packet network (see FIG. 1A, see page 9, line 1-10; see page 10, line 17-30; Ethernet LAN, or Token Ring LAN).

Regarding Claims 33,35 and 50, Berken discloses a wired network comprises an Ethernet compliant network line (see FIG. 1A, Ethernet LAN; see page 9, line 1-10; see page 10, line 17-30).

Regarding Claims 34,51, 52 and 64, Berken discloses the wired network is a conventional switched telephone network (see FIG. 1A, PSTN 151; see page 9, line 1-10; see page 10, line 17-30), wherein the network interface communication via using digital information (see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22; transmission digital information over PSTN).

Regarding Claims 36 and 53, Berken discloses the communication network supports the established of voice calls by the at least one portable terminal via the wired network (see FIG. 1A, PSTN, Ethernet or Token Ring networks; see page 9, line 1-10; see page 10, line 17-30).

Regarding Claims 37 and 54, Berken discloses the communication network supports the receipt of voice calls by the at least one portable terminal via the wired network (see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22; the radio network receives voice calls via PSTN, Ethernet or Token Ring network).

Regarding Claims 38 and 55, Berken discloses wherein the communication network supports the concurrent exchange of data unrelated to a voice call (see FIG. 1A; see page 7, line 25 to page 8, line 7; data packets carry actual data, not the management of voice calls which is related to a voice call).

Regarding Claim 56, Berken discloses wherein the designated one of the at least one network interface is designated based upon information received via the wireless transceiver (see FIG. 1B, packet switch 111 of the node 101 designates a fiber port 205 for PSTN or Ethernet based upon received information from radio interface 115; page 5, line 1-27; page 7, line 19-24).

Regarding Claim 57, Berken discloses wherein the designated one of the at least one network interface is designated based upon information received via the network interface (see FIG. 1B, packet switch 111 of the node 101 designates a fiber port 205 for PSTN or Ethernet based upon received information page 5, line 1-27; page 7, line 19-24).

Regarding Claim 61, Berken discloses wherein the at least one access device comprises a network interface circuit that communicates using a packet protocol (see FIG. 1A-B, a network interface of node 101 uses Ethernet LAN 143 or Token Ring LAN 145; see page 4, line 16-25; see page 7, line 7-16).

Regarding Claim 65, Berken discloses wherein the network interface is compatible with a conventional analog loop connection (see FIG. 1A, B, network interface 141 connecting with PSTN 151; thus, it is clear that PSTN utilizes a conventional analog local loop connection; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24).

Regarding Claim 66 and 76, Berken further discloses wherein the contents of each digital voice packet transmitted wirelessly by a communication device of a first party (see FIG.

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1A, voice packet transmitted via radio by the voice telephone 127) is received in a digital voice packet by a destination party (see FIG. 1A,D, subscriber line 141/171, receiving a digital voice packet at subscriber line 171 where a subscriber/destination party is connected).

Regarding Claims 69 and 70, Berken discloses the at least one wireless receiver and the at least one wireless transmitter, wherein the at least one wireless receiver and the at least one wireless transmitter comprises a signal transceiver (see FIG. 1A,C, radio 211 interface/port which perform both transmitter and receiver functionalities; see page 6, line 14-20).

Regarding Claims 71 and 72, Berken discloses wherein the wireless communication circuitry comprises at least one transceiver, wherein the at least one transceiver comprises a single transceiver (see FIG. 1A,C, radio 211 interface/port which perform both transmitter and receiver functionalities; see page 6, line 14-20).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 23,40, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Cripps (US005838730A).

Regarding Claims 23, 40 and 81, Berken explicitly disclose a frequency of approximately 2.4 gigahertz. However, using 2.4 GHz frequency hopping is well known in the art as defined by FCC. In particular, Cripps discloses wherein the wireless packet network

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communicates at a frequency of approximately 2.4 gigahertz (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide 2.4 GHz, as taught by Cripps, in the system of Berken, so that it would provide a transmitter/receiver in accordance with FCC rules for 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

6. Claims 26,27,31-32,43,44, 48-49,59, 60, 62, 74, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Perkins (US005159592A).

Regarding Claims 26,27,43,44, 59, 60, 62, 74, and 75, Berken does not explicitly disclose a packet Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins discloses wherein the wireless packet network comprising communication device (see FIG. 2, Mobile Unit MU 10) and the access device (see FIG. 1, a combined system of Header station HS 12 and gateway 16) uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 4, line 10-20; see col. 7, line 35-56; col. 8, line 30-45; mobile unit 10 and access gateway utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP, as taught by Perkins, in the system of Berken, so that it would provide wireless network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

Regarding Claims 31-32 and 48-49, Berken does not explicitly disclose the wired network uses an Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins

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discloses wherein the wired network comprises a packet network, uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 3, line 55-64; col. 4, line 10 to col. 5, line 60; see col. 7, line 5-67; col. 8, line 45-67; Header station couples to a wired packet network utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP in wire network, as taught by Perkins, in the system of Berken, so that it would provide wireless migration users to a network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

7. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Callon (US005251205A).

Regarding Claim 67, Berken discloses wherein the communication network comprises a plurality of access devices (see page 10, line 20-30; see page 11, line 15-17,29-31; nodes in the network), and routing of digital voice packets between access devices as set forth above in claim 58.

Berken does not explicitly disclose based upon a cost of. However, using a least cost route/path is well known in the art. In particular, Callon discloses wherein the routing is based upon a cost of use of communication path (see FIG. 5A, 8A, 10A; cost; see col. 13, line 14-24; see col. 21, line 21 to col. 22, line 67; also see FIG. 12-13, col. 18-19). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing base upon cost, as taught by Callon, in the system of Berken, so that it would help to share network traffic loads between paths; see Callon col. 21, line 50-60.

8. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Reece (US005915214A).

Regarding Claim 68, Berken discloses using routing information received by the communication device as described above in claim 58. Berken does not explicitly disclose alternate routing. However, user selection alternate routing based upon cost of the service provider is well known in the art. In particular, Reece discloses a user is prompted to select a routing alternative using routing information received by the communication unit (see FIG. 6, step 640,650,651,661,660,670; see FIG. 7-10; user is prompted with the provider information/cost to select a routing/switch different/alternative using routing/switching information received at the terminal; see col. 12, line 60 to col. 14, line 67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide user selection of alternate routing, as taught by Reece, in the system of Berken, so that it would allow user to select a different/alternative, lower cost provider to complete the call; see Reece col. 3, line 19-65.

9. Claims 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Lewen (US005341374A).

Regarding Claim 77, Berken discloses wherein the at least one processor received digital voice data and conversion of digital voice data as set forth above in claim 73.

Berken does not explicitly disclose queues received data and delays conversion of queued data for an adjustable period of time. However, Lewen teaches queuing (see FIG. 4, queuing/storing/collecting common memory 80) received digital voice data (see FIG. 2, collect

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received samples 120; see col. 14, line 44-49) and delays conversion of queued digital voice data for an adjustable period of time (see FIG. 2, delay time for storing/collecting voice samples in the memory before packetizing is adjusted between T_w (walktime) up to T_{bfr} (buffer storage time)); see col. 15, line 5-9,15-30. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to queue received data and delays conversion of queued data for an adjustable period of time, as taught by Lewen in the system of Berken, so that it would provision a communication system which effectively provides integrated voice, data and video communication and also provide real time reception of voice communication; see Lewen col. 2, line 50-62.

Regarding Claim 78, Lewen further discloses adjusts the period of time based upon a network propagation delay (see col. 13, line 56-66; see col. 14, line 22-39; see col. 15, line 5-9,15-30; adjusting delay time according T_w (propagation delay)). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the period of time based upon a network propagation delay, as taught by Lewen in the system of Berken, for the same motivation as set forth above in claim 77.

Regarding Claim 79, Lewen further discloses adjustable period of time using a packet sent to the communication device in response to a packet sent by the communication device (see col. 13, line 56-66; see col. 14, line 22-39; see col. 15, line 5-9,15-30; adjusting delay time according T_w (propagation delay), which is a time required for a signal bit of a frame/packet to travel from transmitting node to receive node). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide adjustable period of time using a packet sent to the communication device in response to a packet sent by the

communication device, as taught by Lewen in the system of Berken, for the same motivation as set forth above in claim 77.

10. Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Lewen as applied to claim 79 above, and further in view of McKee (US005477531A).

Regarding Claim 80, neither Berken nor Lewen explicitly disclose a test packet. However, C discloses determining propagation delay or queuing delay by utilizing in response to test packet sent by the communication device (see FIG. 2, test packet; see col. 1, line 60 to col. 2, line 60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a test packet, as taught by McKee, in the combined system of Berken and Lewen, so that it would provide to determine/test propagation delay or queuing delay; see McKee abstract col. 2, line 20-32.

11. Claims 85-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Focsaneanu (US005610910A).

Regarding Claim 85, Berken discloses wherein at least one processor is further operable to cause routing of one of the digital voice packets over a network as set forth in claim 73.

Berken does not explicitly disclose over a wired network. However, Focsaneanu teaches routing one of digital voice data (see FIG. 7, ISDN terminal) or electrical signals representative of sound (see FIG. 7, POTS terminal) over a wired network (see FIG. PSTN 216 or Data Network 214); see col. 7, line 10-50. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide user device connection to

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PSTN or data wired network, as taught by Focsaneanu in the system of Berken, so that it would provide an intelligent connection to multiple types of service and no-service specific transport networks in multiple protocol environments; see Focsaneanu col. 4, line 10-56.

Regarding Claim 86, Focsaneanu discloses the routing is based upon input of a user of the communication device (see col. 2, line 59-66; col. 9, line 24, line 40; see col. 10, line 10-35; see col. 8, line 10-40; customer/user request/input for specific service (i.e. POTS or data) for routing. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing is based upon input of a user of the communication device, as taught by Focsaneanu in the system of Berken, for the same motivation as set forth above in claim 85.

Regarding Claim 87, Focsaneanu discloses wherein the wired network is a packet network (see FIG. 7, data/packet switching network 214 utilizing protocols TCP/IP, X.25, ATM ; see col. 7, line 10-20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet network as taught by Focsaneanu in the system of Berken, for the same motivation as set forth above in claim 85.

Regarding Claim 88, Focsaneanu discloses wherein the wired network is a public switched telephone network (see FIG. 7, PSTN 212; see col. 7, line 10-17). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PSTN as taught by Focsaneanu in the system of Berken, for the same motivation as set forth above in claim 85.

Original Rejection

12. Claims 22,28,29,36-39,45,46,53-58,63,66, and 69-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton (US00RE38787E) in view of Drakopoulos (US005506848A).

Regarding Claims 22, 58 and 63, Sainton discloses a communication network supporting the exchange of voice and data (see FIG. 14, cellular telephone system; see col. 5, line 19-32), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities) adapted for communication using a packet protocol (see col. 5, line 19-32; see col. 6, line 21-30; a cellular telephone communicates utilizing frame/packet protocol);

the at least one portable terminal adapted for converting sound into digital voice packets (see FIG. 1B, microphone 102 and, a combined system of voice processing 104, A/D 108, and modulator 22 (see FIG. 1A)) for transmission via the wireless transceiver (see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25; voice signals are converted to digitized voice packets/frames and transmitted), and for receiving digital voice packets via the wireless transceiver (see FIG. 1A, Antenna 2, Mixer 10; see col. 6, line 21-50), the contents of the digital voice packet for conversion into sound (see FIG. 1B, speaker 100 and a combined system of voice processing 104, D/A 106, and demodulator 18 (see FIG. 1A); see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25; converts digitized voice packets/frames into voice signals, then to sound);

the at least one portable terminal adapted for capturing digital data into data packets (see FIG. 1B, a combined system of Data processing 118 and modulator 24 (see FIG. 1A)) for

transmission via the wireless transceiver (see FIG. 1A, Antenna 2, mixer 8, amplifier 6; see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25; data signals are converted to data packets/frames and transmitted), and for receiving data packets via the wireless transceiver (see FIG. 1A, Antenna 2, Mixer 10), the contents of the data packets used for reproducing digital data (see FIG. 1B, a combined system of Data processing 118 and demodulator 20(see FIG. 1A; see col. 6, line 30-52; see col. 9, line 25 to col. 10, line 21; converts data packets/frames into data signals); and

at least one access device (see FIG. 14, a base station comprising a Cell site transmitter 1412) having a wireless transceiver (see FIG. 14, base station has a transceiver) for exchanging one or both of digital packets and digital data packets with the at least one portable terminal (see FIG. 14, exchange packets/frame with cellular phone/device 1), the at least one access device comprising a network interface (see FIG. 14, an interface that connects to cellular telephone network office 1402) for exchanging information via a wired network (see FIG. 14, cellular telephone network office connects to the wire network (e.g. PSTN, Internet, Ethernet, or equivalent thereof); see col. 21, line 20-36; see col. 5, line 19-35);

the at least one access device selectively transferring to its wireless transceiver for transmission at least a portion of the information received from its network interface (see FIG. 14, a base station comprising a Cell site transmitter 1412 selectively, in transmit direction to wireless transceiver, moves/transfer the data packets/frame received from its network interface (via cellular telephone network office); see col. 21, line 20-36), and

selectively transferring to its network interface for transmission at least a portion of the information received by its wireless transceiver (see FIG. 14, a base station comprising a Cell

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site transmitter 1412 selectively, in receive direction from wireless transceiver, moves/transfer the data packets/frame to its network interface (to cellular telephone network office); see col. 21, line 20-36); and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing the digital voice packets through the communication network (see col. 8, line 25 to col. 9, line 25; digitized packets/frames/data from the cellular phone comprise routing/forwarding information through the cellular telephone system).

Sainton does not explicitly disclose destination information. However, it is well known in the art when forming and routing packets/frames over the network to remote end/destination, one must use destination address/number/information to route. In particular, Drakopoulos teaches wherein the outgoing digital voice packets comprise destination information (i.e. signaling/control information) used for routing the outgoing digital voice packets through the wireless packet network (see col. 5, line 31-42, 44-60; see col. 3, line 55-65; see col. 6, line 1-10; using the address of the destination end user in voice packet for routing through the wireless network). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the use of destination information for routing the digital voice packet, as taught by Drakopoulos and well established teaching in art in the system of Sainton, so that it would ensure the network to route the voice packet to destination end user, and it would also maximize utilization of system resources and optimize performance; see Drakopoulos col. 1, line 64-67; see Drakopoulos col. 2, line 15-39.

Regarding Claim 39, Sainton discloses a communication network supporting the exchange of voice and data (see FIG. 14, cellular telephone system; see col. 5, line 19-32), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities) adapted for communication using a packet protocol (see col. 5, line 19-32; see col. 6, line 21-30; a cellular telephone communicates utilizing frame/packet protocol);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital representation of sound (see FIG. 1A, a cellular phones exchanges/transfer via a radio transceiver (i.e. FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6) converted digitized voice packets/frames (i.e. of voice/sound signals); see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25;

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital data ((see FIG. 1A, a cellular phones exchanges/transfer via a radio transceiver (i.e. FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6) converted data packets/frame (of data signals)); see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25;

at least one access device (see FIG. 14, a base station comprising a Cell site transmitter 1412) having a wireless transceiver (see FIG. 14, base station has a transceiver) for exchanging one or both of digital packets and digital data packets with the at least one portable terminal (see FIG. 14, exchange packets/frame with cellular phone/device 1), the at least one access device

comprising a network interface (see FIG. 14, an interface that connects to cellular telephone network office 1402) for exchanging information via a wired network (see FIG. 14, cellular telephone network office connects to the wire network (e.g. PSTN, Internet, Ethernet, or equivalent thereof); see col. 21, line 20-36; see col. 5, line 19-35);

the at least one access device adapting one or both of packets comprising digital representation of sound and packets comprising digital data from its wireless transceiver for transmission via designated one of the at least one network interface (see FIG. 14, a base station comprising a Cell site transmitter 1412 transmits the voice/data packet/frame received from a combined system of transceiver to a designated/assigned/picked network interface (to cellular telephone network office); see col. 21, line 20-36; and

for adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver (see FIG. 14, a base station comprising a Cell site transmitter 1412 transmits the voice/data packet/frame received from a designated/assigned/picked network interface via a combined system of transceiver (to cellular phone); see col. 21, line 20-36; and

wherein the packets comprising digital representation of sound also comprises information used for routing the digital voice packets through the communication network (see col. 8, line 25 to col. 9, line 25; digitized packets/frames/data from the cellular phone comprise routing/forwarding information through the cellular telephone system).

Sainton does not explicitly disclose destination information. However, it is well known in the art when forming and routing packets/frames over the network to remote end/destination, one

must use destination address/number/information to route. In particular, Drakopoulos teaches wherein the outgoing digital voice packets comprise destination information (i.e. signaling/control information) used for routing the outgoing digital voice packets through the wireless packet network (see col. 5, line 31-42, 44-60; see col. 3, line 55-65; see col. 6, line 1-10; using the address of the destination end user in voice packet for routing through the wireless network). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the use of destination information for routing the digital voice packet, as taught by Drakopoulos and well established teaching in art in the system of Sainton, so that it would ensure the network to route the voice packet to destination end user, and it would also maximize utilization of system resources and optimize performance; see Drakopoulos col. 1, line 64-67; see Drakopoulos col. 2, line 15-39.

Regarding Claims 28 and 45, Sainton discloses the packets exchanged by the at least one portable terminal comprises digital voice packets and data packets (see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25; see col. 9, line 25 to col. 10, line 21; digital voice and data frames/packets). Drakopoulos also discloses the packets exchanged by the at least one portable terminal comprises digital voice packets and data packets (see col. 5, line 9-42).

Regarding Claims 29 and 46, Sainton discloses wherein packets are transported wirelessly without regard to content (see FIG. 1A-B; col. 6, line 30-52; see col. 9, line 25 to col. 10, line 21; packets are transmitted regardless whether it is voice or data packets). Drakopoulos also discloses wherein packets are transported wirelessly without regard to content (see FIG. 6, 602; see col. 5, line 9-22).

Regarding Claims 36 and 53, Sainton discloses the communication network supports the established of voice calls by the at least one portable terminal via the wired network (see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25). Drakopoulos also discloses the communication network supports the established of voice calls by the at least one portable terminal via the wired network (see col. 5, line 9-67).

Regarding Claims 37 and 54, Sainton discloses the communication network supports the receipt of voice calls by the at least one portable terminal via the wired network (see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25). Drakopoulos also discloses the communication network supports the receipt of voice calls by the at least one portable terminal via the wired network (see col. 5, line 9-67).

Regarding Claims 38 and 55, Sainton discloses wherein the communication network supports the concurrent exchange of data unrelated to a voice call (see FIG. 1A-B; col. 6, line 30-52; see col. 9, line 25 to col. 10, line 21; data packets carry actual data traffic, not the management of voice calls which is related to a voice call). Drakopoulos also discloses wherein the communication network supports the concurrent exchange of data unrelated to a voice call (see FIG. 6, 602; see col. 5, line 9-22).

Regarding Claim 56, Drakopoulos discloses wherein the designated one of the at least one network interface is designated based upon information received via the wireless transceiver (see col. 5, line 9 to col. 6, line 65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing based upon received, as taught by Drakopoulos in the system of Sainton, for the same motivation as set forth above in claim 39.

Regarding Claim 57, Drakopoulos discloses wherein the designated one of the at least one network interface is designated based upon information received via the network interface (see col. 5, line 9 to col. 6, line 65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing based upon received, as taught by Drakopoulos in the system of Sainton, for the same motivation as set forth above in claim 39.

Regarding Claim 66, the combined system of Sainton and Drakopoulos discloses all claimed limitation as set forth above in claim 58. Establishing an end-to-end connection between caller and callee stations is well known in the art of communication. In particular, Drakopoulos further discloses wherein the contents of each digital voice packet transmitted wirelessly by a communication device of a first party (see FIG. 2, Mobile user 216 on the left hand side transmits packet data) is received in a digital voice packet by a destination party (see FIG. 2, Mobile user 216 on the middle/right hand side received packet data; see col. 3, line 22-55; col. 5, line 9-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide end to end connection between two mobile users, as taught by Drakopoulos in the system of Sainton, for the same motivation as set forth above in claim 58.

Regarding Claims 69 and 70, Sainton discloses the at least one wireless receiver and the at least one wireless transmitter, wherein the at least one wireless receiver and the at least one wireless transmitter comprises a signal transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities); see col. 6, line 20-62.

Regarding Claims 71 and 72, Sainton discloses wherein the wireless communication circuitry comprises at least one transceiver, wherein the at least one transceiver comprises a single transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities); see col. 6, line 20-62.

13. Claims 23,24,40,41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Drakopoulos, as applied to claims 22 and 39 above, and further in view of Cripps (US005838730A).

Regarding Claims 23 and 40, neither Sainton nor Drakopoulos explicitly disclose a frequency of approximately 2.4 gigahertz. However, using 2.4 GHz frequency hopping is well known in the art as defined by FCC. In particular, Cripps discloses wherein the wireless packet network communicates at a frequency of approximately 2.4 gigahertz (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide 2.4 GHz, as taught by Cripps, in the combined system of Sainton and Drakopoulos, so that it would provide a transmitter/receiver in accordance with FCC rules for 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

Regarding Claims 24 and 41, neither Sainton nor Drakopoulos explicitly disclose a frequency hopping spread spectrum technique. However, using frequency hopping spread spectrum techniques is well known in the art. In particular, However, Cripps discloses wherein

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the wireless packet network communicates frequency hopping spectrum technique (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide frequency hopping spread spectrum 2.4 GHz, as taught by Cripps, in the combined system of Sainton and Drakopoulos, so that it would provide a transmitter/receiver in accordance with FCC rules to support frequency hopping spread spectrum 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

14. Claims 25 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Drakopoulos, as applied to claims 22 and 39 above, and further in view of Honing (US005481533A).

Regarding Claims 25 and 42, neither Sainton nor Drakopoulos explicitly disclose a direct sequence spread spectrum technique. However, using direct sequence spread spectrum technique is well known in the art. In particular, Honing discloses wherein the wireless packet network communicates using a direct sequence spread spectrum technique (abstract; see col. 2, line 34-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide direct sequence spread spectrum technique, as taught by Honing, in the combined system of Sainton and Drakopoulos, so that it would suppress interference; see Honing col. 2, line 38, line 38-40.

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15. Claims 26,27,30-32,43,44,47-49,59-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Drakopoulos, as applied to claims 22 and 39 above, and further in view of Perkins (US005159592A).

Regarding Claims 26,27,43,44, and 59-62, neither Sainton nor Drakopoulos explicitly disclose a packet Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins discloses wherein the wireless packet network comprising communication device (see FIG. 2, Mobile Unit MU 10) and the access device (see FIG. 1, a combined system of Header station HS 12 and gateway 16) uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 4, line 10-20; see col. 7, line 35-56; col. 8, line 30-45; mobile unit 10 and access gateway utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP, as taught by Perkins, in the combined system of Sainton and Drakopoulos, so that it would provide wireless network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

Regarding Claims 30-32 and 47-49, neither Sainton nor Drakopoulos explicitly disclose the wired network comprises a packet network, uses an Internet Protocol (IP), wherein IP protocol is TCP/IP. However, Perkins discloses wherein the wired network comprises a packet network, uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 3, line 55-64; col. 4, line 10 to col. 5, line 60; see col. 7, line 5-67; col. 8, line 45-67; Header station couples to a wired packet network utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP in wire network, as taught by Perkins, in the

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combined system of Sainton and Drakopoulos, so that it would provide wireless migration users to a network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

16. Claims 33,35 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Drakopoulos, as applied to claims 22 and 39 above, and further in view of Doviak (US 5,717,737).

Regarding Claims 33,35 and 50, the combined system of Sainton and Drakopoulos discloses a network interface to a wired network as described above in claims 22 and 39. The combined system of Sainton and Drakopoulos wherein the network interface communicates via the wired network in digital form (see Sainton col. 21, line 20-36; see Drakopoulos col. 3, line 24-65)

Neither Sainton nor Drakopoulos explicitly disclose an Ethernet network. However, connecting to an Ethernet network is well known in the art. In particular, Doviak discloses herein the at least one network interface is compatible with an Ethernet network (see FIG. 1, Ethernet Local Area Network 10; see col. 6, line 19-32). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Ethernet LAN, as taught by Doviak, in the combined system of Sainton and Drakopoulos, so that it would provide flexibility to users; see Doviak col. 3, line 18-55.

17. Claims 34,51, 52,64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Drakopoulos, as applied to claims 22 and 39 above, and further in view of Weaver (US005956673A).

Regarding Claims 34,51, 52 and 64, the combined system of Sainton and Drakopoulos discloses a network interface to a wired network as described above in claims 22, 39 and 58. The combined system of Sainton and Drakopoulos wherein the network interface communicates via the wired network in digital form (see Sainton col. 21, line 20-36; see Drakopoulos col. 3, line 24-65)

Neither Sainton nor Drakopoulos explicitly disclose a conventional switched telephone network. However, having a conventional switched telephone network is well known in the art. In particular, Weaver discloses a network comprises a conventional switched telephone network (see FIG. 2. PSTN 40), wherein the network interface communicates via the wired network in digital form (see FIG. 1, BS's local vocoder 35 communicates via PSTN in PCM 210 form; see col. 3, line 28 to col. 4, line 60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PSTN, as taught by Weaver, in the combined system of Sainton and Drakopoulos, so that it would enable the system to route the PCM over existing/conventional PSTN, and it would avoid the tandem vocoding operation; see Weaver col. 1, line 60-67; see col. 2, line 15-20.

Regarding Claim 65, the combined system of Sainton, Drakopoulos and Weaver discloses all claimed limitation as set forth above in claim 64. Weaver discloses wherein the network interface is compatible with a conventional analog loop connection (see FIG. 2, network

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interface connecting with PSTN 40; thus, it is clear that PSTN utilizes a conventional analog local loop connection; see col. 3, line 28 to col. 4, line 60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PSTN's analog local loop connection, as taught by Weaver, in the combined system of Sainton and Drakopoulos, for the same motivation as set forth above in claim 64.

18. Claim 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Drakopoulos, as applied to claim 58 above, and further in view of Callon (US005251205A).

Regarding Claim 67, the combined system of Sainton and Drakopoulos discloses routing as described above in claim 67. Drakopoulos discloses a plurality of access devices (see FIG. 2, RDP 106; see col. 3, line 22-46)

Neither Sainton nor Drakopoulos explicitly disclose based upon a cost of use of a communication path. However, using a least cost route/path is well known in the art. In particular, Callon discloses wherein the routing is based upon a cost of use of communication path (see FIG. 5A, 8A, 10A; cost; see col. 13, line 14-24; see col. 21, line 21 to col. 22, line 67; also see FIG. 12-13, col. 18-19). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing base upon cost, as taught by Callon, in the combined system of Sainton and Drakopoulos, so that it would help to share network traffic loads between paths; see Callon col. 21, line 50-60.

19. Claim 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sainton in view of Drakopoulos, as applied to claim 58 above, and further in view of Reece (US005915214A).

Regarding Claim 68, the combined system of Sainton and Drakopoulos discloses routing as described above in claim 58. Sainton discloses wherein a user is prompted to select information received by the communication device (see col. 13, line 5-25; user is prompted with information).

Neither Sainton nor Drakopoulos explicitly disclose alternate routing. However, user selection alternate routing based upon cost of the service provider is well known in the art. In particular, Reece discloses a user is prompted to select a routing alternative using routing information received by the communication unit (see FIG. 6, step 640,650,651,661,660,670; see FIG. 7-10; user is prompted with the provider information/cost to select a routing/switch different/alternative using routing/switching information received at the terminal; see col. 12, line 60 to col. 14, line 67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide user selection of alternate routing, as taught by Callon, in the combined system of Sainton and Drakopoulos, so that it would allow user to select a different/alternative, lower cost provider to complete the call; see Reece col. 3, line 19-65.

Response to Arguments

20. Applicant's arguments with respect to claims 22-88 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 22, 23-38,40-57,59-72, the applicant argued that, “...regarding amended claim 22...the proposed combination of references does not teach, suggest, or discloses... “ a communication network supporting...through the communication network”... The cited teaching of Berken fail to teach anything about selectively transferring information received from a network interface to a wireless transceiver for transmission...Sainton make no mention of an access device selectively transferring to a network interface for transmission at least a portion of the information received by a wireless transceiver...” in page 16, paragraph 2, page 17, paragraph 1; page 23-26.

In response to applicant's argument, the examiner respectfully disagrees with the argument above since the combined system of Sainton and Drakopoulos discloses the claimed invention set forth in claim 22.

Sainton discloses a communication network supporting the exchange of voice and data (see FIG. 14, cellular telephone system; see col. 5, line 19-32), the network comprising: at least one portable terminal having a wireless transceiver (see FIG. 1-2, cellular phone has a transceiver (FIG. 1A, a combined system of Antenna 2, mixer 10,8, Diplexer 4, amplifier 6 which perform both transmitter and receiver functionalities) adapted for communication using a packet protocol (see col. 5, line 19-32; see col. 6, line 21-30; a cellular telephone communicates utilizing frame/packet protocol); the at least one portable terminal adapted for converting sound into digital voice packets (see FIG. 1B, microphone 102 and, a combined system of voice processing 104, A/D 108, and modulator 22 (see FIG. 1A)) for transmission via the wireless transceiver (see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25; voice signals are converted to digitized voice packets/frames and transmitted), and for receiving

digital voice packets via the wireless transceiver (see FIG. 1A, Antenna 2, Mixer 10; see col. 6, line 21-50), the contents of the digital voice packet for conversion into sound (see FIG. 1B, speaker 100 and a combined system of voice processing 104, D/A 106, and demodulator 18 (see FIG. 1A); see col. 6, line 30-52; see col. 8, line 25 to col. 9, line 25; converts digitized voice packets/frames into voice signals, then to sound); the at least one portable terminal adapted for capturing digital data into data packets (see FIG. 1B, a combined system of Data processing 118 and modulator 24 (see FIG. 1A)) for transmission via the wireless transceiver (see FIG. 1A, Antenna 2, mixer 8, amplifier 6; see col. 6, line 20-52; see col. 8, line 25 to col. 9, line 25; data signals are converted to data packets/frames and transmitted), and for receiving data packets via the wireless transceiver (see FIG. 1A, Antenna 2, Mixer 10), the contents of the data packets used for reproducing digital data (see FIG. 1B, a combined system of Data processing 118 and demodulator 20(see FIG. 1A; see col. 6, line 30-52; see col. 9, line 25 to col. 10, line 21; converts data packets/frames into data signals); and at least one access device (see FIG. 14, a base station comprising a Cell site transmitter 1412) having a wireless transceiver (see FIG. 14, base station has a transceiver) for exchanging one or both of digital packets and digital data packets with the at least one portable terminal (see FIG. 14, exchange packets/frame with cellular phone/device 1), the at least one access device comprising a network interface (see FIG. 14, an interface that connects to cellular telephone network office 1402) for exchanging information via a wired network (see FIG. 14, cellular telephone network office connects to the wire network (e.g. PSTN, Internet, Ethernet, or equivalent thereof); see col. 21, line 20-36; see col. 5, line 19-35); the at least one access device selectively transferring to its wireless transceiver for transmission at least a portion of the

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information received from its network interface (see FIG. 14, a base station comprising a Cell site transmitter 1412 selectively, in transmit direction to wireless transceiver, moves/transfer the data packets/frame received from its network interface (via cellular telephone network office); see col. 21, line 20-36), and selectively transferring to its network interface for transmission at least a portion of the information received by its wireless transceiver (see FIG. 14, a base station comprising a Cell site transmitter 1412 selectively, in receive direction from wireless transceiver, moves/transfer the data packets/frame to its network interface (to cellular telephone network office); see col. 21, line 20-36); and wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing the digital voice packets through the communication network (see col. 8, line 25 to col. 9, line 25; digitized packets/frames/data from the cellular phone comprise routing/forwarding information through the cellular telephone system).

It is well known in the art when forming and routing packets/frames over the network to remote end/destination, one must use destination address/number/information to route. In particular, Drakopoulos teaches wherein the outgoing digital voice packets comprise destination information (i.e. signaling/control information) used for routing the outgoing digital voice packets through the wireless packet network (see col. 5, line 31-42; using the address of the destination end user in voice packet for routing through the wireless network).

Regarding applicant argument of “selectively”, in general, examiner asserts “selectively” as “selecting or picking” data from one end of the cell site transmitter 1412 (in a base station) in order to transmit to the other side, as one skilled in the ordinary art would clearly evident from FIG. 14. In particular, a base station comprising a Cell site transmitter 1412

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selecting/picking data received from its network interface (via cellular telephone network office) in order to transmit/transfer to wireless transceiver end; see col. 21, line 20-36). Similarly, a base station comprising a Cell site transmitter 1412 selecting/picking data received from its wireless interface (from cellular phone) in order to transmit/transfers to network interface end (to cellular telephone network office). Thus,

Regarding claims 22, 39 and 58, and their dependent claims 23-38,40-57,59-72 the applicant argued that, "...the proposed combination of Sainton and Drakopoulos fails to teach or suggest where digital information wirelessly exchanged by the at least one portable terminal comprise destination information used for routing the digital voice packets through the communication network...the use of...destination information used for routing digital voice packets through the communication network is not well known in the context of the elements...certainly not well known at the time of applicant invention....Applicant request that the examiner cites a prior art reference that specifically shows what the Examiner alleges is well known...reservation request of Drakopoulos is different from, and fails to teach or suggest a digital voice packet..." in page 17, paragraph 3; page 18, paragraph 1-5; page 20; page 22-26.

In response to applicant's argument, the examiner respectfully disagrees with the argument above since the combined system of Sainton and Drakopoulos discloses the claimed invention set forth in claim 22, 39 and 58.

Sainton discloses wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing the digital voice packets through the communication network (see col. 8, line 25 to col. 9, line 25; **digitized packets/frames/data from the cellular phone comprise routing/forwarding information through the cellular**

telephone system). Drakopoulos teaches wherein the outgoing digital voice packets comprise destination information (i.e. **signaling/control information**) used for routing the outgoing digital voice packets through the wireless packet network (see col. 5, line 31-42, 44-60; see col. 3, line 55-65; see col. 6, line 1-10; using the address of the destination end user in voice packet for routing through the wireless network). Drakopoulos discloses TDMA frames that are being sent from mobile terminal to base station, and each TDMA frames contains time slots; see col. 3, line 55-65; see col. 5, line 31-36. Each time slot contains multiple channels with request channels (i.e. destination information) and voice channels (i.e. voice packet). Clearly, examiner is asserting an entire TDMA frame as applicant digital voice packet since a frame has a destination information (in request channel for signaling/control) which followed by voice packet (in payload or voice packet channel). One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Thus, it is clear that the combined system of Sainton and Drakopoulos discloses the argued claimed invention.

Examiner does not understand the applicant argument of “using destination information for routing digital voice packets through the communication network” is not well established or well known in the art. How could one make a phone call to the remote user, but not defining a remote user address/telephone use for routing a call through the network? How could one mail a letter to the other person, but not writing the destination address used for routing the letter? It is clear to one ordinary skill in the art that it would be impossible “not to include destination

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information” use for routing a call/mail to the receipt, and “destination information” must contain in the frame/packet which is routed over the network.

Moreover, it is so well known in the art that TDMA or radio frame contains destination information for routing through the communication network” as one can evident from the following prior arts:

Hershey (US005481539A)- FIG. 4, Destination ID and data field in the TDMA frame and data; see entire document.

Harrisson (US 5,068,916)- FIG. 3, Destination address 48b and data field 48e in the TDMA frame; see entire document.

Berry (US 5,758,256)- voice packet comprising destination information (i.e. message type, sequence number) and data field; see col. 5, line 64 to col. 6, line 9.

The following prior arts recite the well known and establish concept of a **packet/frame header comprises destination information for routing through the communication network**.

Fischer (US005502726A)- routing a packet header with destination address from one node to the other over a network; entire document

Cerna (US005444707A)- embedding destination information within a header portion of a voice information packet; see claim 4 and 5.

Agrawal (US 4,493,021)- FIG. 2, destination address (DA) in the packet header and data block; see entire document.

Richter (US006104706A)- FIG. 6, a packet 52 with destination address 76, destination count 70,72,74 in a packet header and data 78, where packet 52 contains audio data representing one speaker’s voice; see col. 7, line 10-20.

Kline (US006157653A)- FIG. 3, a voice packet with header 302 with connection identifier and sequence number 306 used routing/switching over the network and a payload 304 with voice data- see entire document.

In accordance with the applicant's request examiner cited above prior arts to support examiner assertion of well known in the art. Also, once skilled in the ordinary art would clearly evident that **"a packet header"** must contains "destination information" when sending from one end to the other end.

Regarding claims 39 and its dependent claims 40-47, the applicant argued that, "...the proposed combination of references does not teach, suggest, or discloses... " a communication network supporting...through the communication network"... the office action fails to cite where the combination of Sainton and Drakopoulos teaches adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver ..." in page 19; page 20, paragraph 3.

In response to applicant's argument, the examiner respectfully disagrees with the argument above.

The combined system of Sainton and Drakopoulos discloses the claimed invention set forth above in rejection of claim 39, and response to claim 22 above.

Sainton discloses adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver (see **FIG. 14, a base station comprising a Cell site transmitter 1412 transmits the voice/data packet/frame**

received from a designated/assigned/picked network interface via a combined system of transceiver (to cellular phone); see col. 21, line 20-36.

Conclusion

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

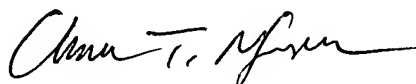
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